

16. (new) A plastic masking cover according to claim 14 wherein the middle layer comprises post-consumer recycled material.

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Cont
17. (new) A plastic masking cover according to claim 10 wherein the film is packaged in elongated rolls that are dismissible from roll dispensers.

18. (new) A plastic masking cover according to claim 10 wherein the film is dispensable from the roll by crosswise tearing or of a portion from the roll, the film being formed so as to have enhanced tensile strength in a longitudinal direction, but having relatively weak cross-directional tear characteristics that facilitate tearing covers from the roll.

REMARKS

In the present response, the specification has been amended to correct a typographical error, and claim 1 has been amended in order to overcome the indefiniteness objection to the word "sufficient" set forth in the office action. It is believed that the application is now in proper form for consideration.

In the office action, all of the claims of the application have been rejected over the Poirier reference alone or in combination with Arvedson, et al. and Ramsey, et al. These rejections are respectfully traversed.

The present invention comprises an improved paint masking cover that is particularly useful in connection with covering protected surfaces of an automobile or other vehicle while other surfaces of the vehicle are spray painted. The invention has application to other painting applications and other painting methods, but vehicle painting is an important application.

As explained in the application, the present invention comprises a considerable improvement over existing paint masking materials formed of paper and applied by the use of masking tape. One advantage of the present invention is that the cover has an inner surface that causes the cover to cling to a vehicle surface without the use of masking tape or an adhesive, thus facilitating application and removal of the masking material and reducing considerably the cost of the masking material. Another advantage of the present invention is that the cover has an outer surface that impedes paint dripping and flaking. When paint is applied to a conventional plastic sheeting masking material in a liquid form, as by spray painting, the paint has a tendency to run and drip, and when the paint dries, it flakes off from the masking material, posing a contamination threat to adjacent painted surfaces. With the use of a specially selected and specially treated material on the outer side of the cover, paint adhesion is enhanced and paint dripping and paint flaking are restrained. By combining a cling inner layer with a paint adhesion outer layer in an extruded film desirable inner and outer surface characteristics can be provided in a single sheet of paint cover material. By providing a third layer between the inner and outer surface layers, the strength and tear characteristics of the material can be enhanced by the middle layer, while the inner and outer layers can provide the desired cling and paint adhesion characteristics in less expensive thinner layers.

The masking covers of the present invention are desirably formed in a continuous roll that may be as narrow as 18 inches wide and may be 400 feet long or any desired length. The width of the film may be wider than 18 inches, up to twenty feet or any desired and feasible width. The film may be folded longitudinally once or more times in order to provide a roll that fits on a dispenser rod of a given width. The covers can thus be torn or cut from the rolls in a similar manner as paper masking materials are torn from rolls, minimizing any changes in procedures required by painters in switching from paper to plastic masking materials.

While it is believed that the claims, as originally filed, were limited to paint masking materials, the claims have been amended in order to more specifically set forth that the invention is a paint masking material and to distinguish non-analogous film materials.

In the present office action, the claims have been rejected principally over the Poirier reference, which has nothing to do with paint masking materials. Poirier is directed toward high gloss labels and more particularly to high gloss labels having an improved background color and having a layer of adhesive material applied to one side to the labels for affixing the labels to a desired surface. The Poirier reference does not disclose or suggest any application of the high gloss labels for masking purposes, and it is urged that a person skilled in the art would not consult patents related to labels in order to develop an improved paint masking material. Accordingly, it is urged that the Poirier reference is not analogous and should be withdrawn as a reference.

Moreover the structure of the Poirier label is quite a bit different from applicant's masking material. An important feature of Applicant's masking material is that it comprises a sheet of material that is large enough for masking purposes and has an inner side that clings to the surface being masked and an outer side that provides paint adhesion that minimizes dripping and flaking. Poirier, on the other hand, provides labels that overcome a plastic label color problem by co extruding a high gloss skin of medium density polyethylene on a cavitated polypropylene core. Poirier indicates that the opposite side of the label can also be covered with a second skin of medium density polyethylene or other surface that adheres to an adhesive. Poirier teaches the use of an adhesive, desirably a pressure sensitive adhesive along with a release paper, to affix the labels to a substrate.

The only aspect of Poirier that is arguably relevant is the fact that the upper and lower skins of the labels are corona treated to a level of 38 dynes/cm or greater. The patent, however, does not disclose why this is done or what effect this has, and thus provides no teaching as to the

point of the corona treatment. The patent indicates that the label stock provides an excellent surface for screen printing inks of specific characteristics, but does not say why, even though it is known that corona treatment can benefit printing. Most importantly, the patent says nothing about masking materials or paint adherence or non-adhesive cling to a protected surface, and the patent does not discuss the problem of paint flaking or dripping. Poirier thus suggests no reason for consulting any teaching of Poirier for solving the non-analogous problems addressed by the present invention.

In addition, even if the corona treatment of Poirier were deemed to suggest application for paint masking materials, the corona treatment of Poirier does not disclose the same corona treatment as in the present invention. First, Poirier suggests the corona treatment is satisfactory at the level of 38 dynes/cm. Corona treatment has a property of deteriorating over time and thus requires a higher level upon manufacture, in order to insure that the corona treatment at the time of use is at least 10 dynes/cm greater than the paint or the solvent or carrier or base of the paint. No such teaching is present in the Poirier reference. Nor is such benefit inherent. While the Poirier labels may be manufactured with 38 dynes/cm, that level of surface energy would only be satisfactory when the labels are printed in a printing press immediately after manufacture.

Otherwise, the surface energy would drop quickly to an unacceptably low level. Poirier does not even recognize the problem with deteriorating corona induced surface energy levels over time. In the present invention, in order to provide a 10 dynes/cm surface energy differential at the projected time of use (which would be expected to cover the anticipated shelf life of the product) it has been

found that paint masking material should be corona treated until the outer layer has a surface energy of at least 50 dynes/cm upon manufacture, in order to insure that the level at the time of use is at least 35 dynes/cm. By using a material that has a high inherent surface energy in combination with corona treatment, deterioration of the surface energy below acceptable levels at the time of use is avoided.

Not a 35
Not claimed!

For the foregoing reasons, it is believed that the present invention is distinguishable from both the subject matter and the teaching of Poirier

In the claims of the present application, as amended, the claims specifically recite that the invention comprises paint masking material, and thus does not include label stock. Moreover, the only independent claims in the application, claims 1 and 10, require that the surface energy of the outer surface be at least 10 dynes/cm greater than the paint at the time of use (claim 1) or 50 dynes/cm at the time of manufacture (claim 10). There is no disclosure or suggestion of any such requirement in Poirier, and the fact that Poirier is not used as paint masking material avoids any suggestion that the characteristic is inherent in Poirier. Thus, it is believed that claims 1 and 10 and all the remaining claims in the application are completely distinguishable from Poirier.

In addition to the limitations of claims 1 and 10, claim 2 also requires that the initial surface energy of the masking material be at least 50 dynes/cm. The especially effective outer surface materials recited in claim 3 and other claims further distinguish Poirier and other references. The fact that these especially effective outer surface materials are combined with substantial level of corona treatment provides a high level of surface energy that is maintained for a sufficient period of time for use of the material.

All of the claims of the application also require an inner layer that is formed of a cling material that is not an adhesive and has greater cling than low density polyethylene sheeting. The use of high density polyethylene is specifically recited in claims 4 and 11. These features are not suggested in any of the cited references and provide an additional basis for the allowance of the claims.

Another feature of the present invention is the use of an intermediate layer between paint adhesion and cling layers in a co-extruded three layer film, in order to provide enhanced handling, strength, and tear characteristics while minimizing the amount of expensive materials used in the

surface layers that affect the paint adhesion characteristics and cling characteristics. Thus, a thinner exterior layer of material that includes more expensive paint adhesion components, such as EVA, can make a cost effective paint cover having desirable handling characteristics. While other products use a strengthening core layer in a film, the particular three layer construction of the present invention is not shown.

Another feature claimed in the present invention, as amended, is the manner in which the covers are packaged. While the covers can be packaged in separate sheets that are folded or otherwise stored individually, a desirable feature is that the covers are packaged in rolls and can be dispensed from rollers in substantially the same manner as paper masking materials are dispensed. Thus, painters accustomed to handling paper masking materials and dispensing the materials from rolls on familiar dispensers can switch to plastic masking materials without having to change the manner in which they dispense the masking materials. The masking materials can be folded once, as shown in the drawings, or more times in order to provide a roll of masking material that fits on an eighteen inch or thirty-six inch rod or dispenser or other convenient size dispenser that may be known. The characteristics of the cover film can be created so that the film has good longitudinal strength and has a weak cross-directional strength, so that the film can be torn from a roll easily. These are all features of the present invention that are not shown or disclosed in any reference or any combination of references of record in this case.

Briefly considering some of the other references cited by the Examiner, Arvedson, et al. discloses a stretch wrap cling film for application such as bundling, packaging, and unitizing of foods and other goods. The main feature of Arvedson, et al. is the provision of a film with a cling side and a slip side. While the use of an intermediate layer for structural or strength characteristics is disclosed, the use of paint adhesion and cling surfaces on opposite sides of the film is not disclosed or taught. The use of corona treatment for enhancing cling surface (which is the opposite

side from the present invention) and the use of minerals and other additives for enhancing slip are discussed, but the use of these features for paint adherence is not disclosed. Arvedson, et al. does not appear to disclose any features that would be of particular application to the present invention or the suggested combination with Poirier. Without any teaching or suggestion as to why or how those two references should be combined, it is urged that a combination of the references would be inappropriate.

Ramsey, et al. similarly discloses a stretch wrap cling film having one side that is more slippery than the other, which is the same subject matter as Arvedson, et al. There is no disclosure in this reference or Arvedson that relates to labels or to a plastic masking material for protecting a surface from paint. The purpose of Ramsey, et al. is to wrap goods for load palletisation. It is urged that the teachings of Arvedson, et al. and Ramsey, et al. relating to stretch wrap films having a slip differential between inner and outer layers has no application to the labels of Poirier or any objective of the Poirier patent and more importantly has no application to the plastic masking covers of the present invention, which is not shown or disclosed in any reference.

For all of the foregoing reasons, it is urged that all of the claims of the present application, namely, existing claims 1-9 and new claims 10-18 are in condition for allowance, and such action is respectfully solicited.

CERTIFICATE OF MAILING

I certify that this correspondence is being deposited with the United States Postal Service as first class mail, on July 30, 2002, in an envelope addressed to:

Assistant Commissioner of Patents
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Respectfully Submitted,

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Specification Amendments Showing Changes

Page 7, line 22, delete "extensior" and substitute - - exterior - -. A marked paragraph is set forth below.

The masking film of the present invention desirably is formed in rolls 28 that are 18 inches wide and approximately 400 feet in length. The film can be folded over once or more on the rolls as shown in FIG. 1 to form folded sheets 20 and 22 in order to provide a wider sheet of material. Preferably, the outer layer 12 is on the [extensior] exterior surface of the folded material. Alternatively, the rolls can be 36 inches wide (or other widths) and the film can be folded over more than one time to form multiple folded layers. For a full body cover, the unfolded film width can be as much as eight to twelve feet or any width desired. A more narrow width is used for film having a "critical edge", which is an edge that is designed to be adjacent a surface being painted. The cling characteristics of the sheeting are such that the film clings to the surface of the painted product but does not adhere to itself in a roll with such tenacity that the film cannot be separated. The material, particularly the central core, is fabricated so that the film has good strength in one direction but tears more easily in a transverse direction so the film can more easily be torn off the roll.

Claim Amendments Showing Changes

Please amend claim 1 to read as set forth below in the marked copy of the claim.

1. (amended) A plastic masking film for protecting a protected surface from paint
directed at the protected surface, the film being formed in a sheet large enough to cover at least a
significant portion of the protected surface, the film comprising at least two layers, an outer layer and
an inner layer, the outer layer having [sufficient] a surface energy of at least about 10 dynes/cm greater
than the paint at the time of use, so as to ensure the adherence of paint to the film and restrain the paint
from dripping or flaking, the [and an] inner layer providing inherent cling that causes the film to adhere
to [a] the protected surface without the use of an adhesive.

→ don't know what layer is paint is.

↳ what's that?